

**Response to Public Comments on the Proposed Issuance of
the general National Pollutant Discharge Elimination System (NPDES) permit for
Aquaculture Facilities in Idaho and Associated, On-site Fish Processors**

EPA has developed a general National Pollutant Discharge Elimination System (NPDES) permit number ID-G13-0000 for aquaculture facilities and associated, on-site fish processing facilities operating in Idaho. This general NPDES permit authorizes wastewater discharges from these facilities to surface waters of the United States throughout Idaho. Notice of the draft permit was published on April 10, 1998 in the Federal Register [59 FR 38473] and the Times-News (Twin Falls) and the Idaho Statesman. Notice provided a public comment period of 60 days, which was later extended to about 90 days. A public meeting and hearing were held on May 12, 1998. The public comment period closed on July 13, 1998.

Oral comments were received during the hearing on May 12, 1998 from a few individuals. More than seventy written comments were received, largely from representatives of aquaculture facilities, associated researchers, and public sympathetic to the industry. Comments were received also from environmental organizations, the U.S. Fish and Wildlife Service, and public concerned about the conditions of waters receiving discharge from the aquaculture industry.

The following public comments and EPA's responses to them are arranged in the same order as the general permit, with some general comments first.

1. Comment: Idaho Rivers United, Idaho Conservation League and the Land and Water Fund commend EPA for its work in developing this permit and it is apparent that much thought has gone into it to ensure that discharges to the waters of the U.S. and the state of Idaho meet state water quality standards.

Response: No response necessary

2. Comment: The U.S. Fish and Wildlife Service (USFWS) supports EPA in its task, and recognizes that Idaho's water quality problems have complex causes in addition to aquaculture, such as agriculture, industry, municipalities, diversions, altered and manipulated flows, and drought.

Response: No response necessary

3. Comment: The aquaculture industry has gobbled up every existing flow of spring water in the Magic Valley to benefit a very few opportunistic individuals. Billingsley Creek, Thousand Springs, and Deep Creek are just a few of the areas destroyed by aquaculture that were once public treasures.

Response: EPA believes that this permit is a major step toward controlling the impact of the aquaculture industry on the water quality of the mid-snake river watershed.

4. Comment: EPA, Idaho Division of Environmental Quality (IDEQ), and all involved in pollutant discharges should try to "pull the wagon in the same direction" to reduce biological and chemical loads in our streams, rivers and lakes. Similar comment from the U.S. Trout Farmers Association and the National Fisheries Institute.

Response: EPA developed this permit with extensive input from IDEQ and the

aquaculture industry, and several collaborative efforts are planned for the future, including: a study of best management practices and wastewater treatment technologies (using effluent data collected pursuant to this permit); a mass balance assessment of the inputs and outputs of the aquaculture facilities; and a sediment impact study.

5. Comment: EPA should shorten and simplify the permit; a general permit should be “general,” rather than detailed and specific. One approach would be to focus on setting limits for those nutrients requiring a TMDL.

Response: EPA has shortened the permit by eliminating redundant text. EPA cannot limit the pollutants covered by the permit to only nutrients requiring a TMDL, because section 402 of the Clean Water Act (CWA) requires that the permit include technology-based limits and water quality-based limits sufficient to ensure that the discharge will meet water quality standards for all pollutants discharged.

6. Comment: The permit should have different requirements for large and small operations.

Response: The final permit does distinguish between large and small operations. The following requirements vary depending on size: compliance monitoring frequency at VI.C. 2.; sampling frequency for the effluent characterization study at VI.C.3.; monitoring and reporting for the whole effluent toxicity (WET) test at VI.C.4. by the largest facilities, and a study of best management practices and wastewater treatment technologies by specific facilities VI C.5.

7. Comment: A general permit is not the appropriate vehicle to address issues of compliance with the Middle Snake River Management Plan.

Response: An NPDES permit is legally required for all discharges of pollutants to waters of the United States, regardless of the existence of a management plan. Assuming that the point of the comment was that EPA should issue individual permits, rather than a general permit, EPA believes that a general permit is appropriate for the Idaho aquaculture industry under the provisions of 40 CFR 122.28. This regulation provides for a general permit for a category of sources which involve the same or substantially similar types of operations; discharge the same types of waste; and require the same effluent limitations. EPA believes the aquaculture sources meet these requirements. In addition the general permit incorporates limits set forth in the Middle Snake River management plan, which is a “TMDL” or “total maximum daily load” document. EPA is required to develop water quality-based effluent limitations within NPDES permits using waste load allocations found in TMDLs (40 CFR §122.44).

8. Comment: A second draft of the permit should be prepared and submitted for further public review.

Response: Under 40 CFR 124.14(a)(4)(B)(1), EPA may prepare a new draft permit if any data or arguments submitted during the comment period raise “substantial new questions.” While EPA did receive useful information and did gain additional insight into the aquaculture industry through the comments submitted, EPA, in its discretion, determined that this information did not constitute “substantial new questions” that

required publication of a new draft. EPA did provide for extensive public review of the draft, by extending the original 60-day review period by 30 days, and by holding public workshops in 1997 and 1998.

9. Comment: All aquaculture facilities should be required to have a permit, regardless of size, production, or feed, just as all municipal facilities are required to have a permit. The rationale for excluding those under 20,000 lbs annual production is unclear. Facilities should be classified according to whether they are circulating systems or non-circulating.

Response: The permit's size exclusion is based on the NPDES regulations at 40 CFR 122.24, which provide that aquaculture facilities are deemed to be "point sources," and thus subject to Clean Water Act's NPDES permit requirement, only if they meet the regulatory definition of a Concentrated Aquatic Animal Production Facility. The production and feed size categories stated in the permit are based on that regulation. In addition, EPA can designate any smaller facility as requiring a permit if it is determined to be a "significant contributor of pollution."

10. Comment: The permit should include a list of names of the specific facilities covered by the permit.

Response: The permit is designed to cover all aquaculture facilities in Idaho now or in the future, except those covered by the exclusion in Section III. EPA cannot provide a complete list of facilities covered by the permit because (1) In addition to existing facilities, the permit covers facilities which may come into existence in the future; (2) facilities which do not meet the production and feeding criteria could, in the future, be determined to be a "significant contributor of pollution" and thus be subject to the permit; (3) some facilities which would otherwise be in the General Permit may request individual permits. Once facilities have submitted Notices of Intent to be covered by the permit (NOI's) and received notification of coverage from EPA, EPA will have a list of facilities covered as of a given date, and that list will be available to the public, but again, the list could change over time.

11. Comment: The list of authorized discharges should include fish metabolites, bacteria, and plant debris.

Response: EPA has revised the permit at Section II to eliminate the list of authorized discharges and instead clarify that the permit does not authorize the discharge of any pollutants not routinely discharged or identified in the NOI by the aquaculture facilities. EPA does consider that fish metabolites, bacteria and plant debris are "pollutants routinely discharged," and thus their discharge would be authorized by the permit.

12. Comment: The aquaculture industry may feed fish feeds which contain oils to bind and float the feed and which produce something of a 'scum' on the water. What is the permit's definition of "sheen or scum" and can the narrative prohibition in Section II be changed to accommodate the reality of some scum associated with floating feeds?

Response: EPA acknowledges that modern feeds can produce a "sheen or scum," and encourages the use of these feeds due to their benefits of full utilization and thus pollution prevention. Therefore, EPA has revised the permit to remove the prohibition.

13. Comment: The Kootenai River should be listed as a special habitat excluded from coverage under the permit because of the threatened Kootenai white sturgeon living there. Habitats for the Bruneau Hot Spring snail and Ute Ladies Tresses should be excluded from the permit because these species have been listed as threatened under the Endangered Species Act.

Response: EPA has modified the permit at III.A. to list habitats of the Kootenai white sturgeon and Bruneau Hot Spring snail as protected water resources and special habitats. A biological assessment has been written for the permit pursuant to the Endangered Species Act, which concluded that the discharges authorized by this permit are not likely to adversely impact Ute Ladies Tresses; therefore, its habitat has not been excluded from coverage.

14. Comment: The Idaho Department of Fish and Game, which has existing facilities discharging to receiving water identified as either habitat for threatened or endangered species, or as being within a Wildlife Management Area, or on a lake, recommends that the permit's exclusion/requirement for waiver provision for such waters apply only to new or expanded facilities and not existing ones.

Response: After consulting with the manager of the Idaho Department of Fish and Game Wildlife Management Area program, EPA has revised the permit so that discharges to waters within a Wildlife Management Area are no longer excluded. However, EPA has maintained the exclusion (in the absence of a waiver) for both new and existing discharges to habitats of threatened or endangered species and for discharges to lakes in order to provide a process for the additional consultation and documentation needed to ensure that for each of these waters, the goals of the Endangered Species Act are met.

15. Comment: The U.S. Fish and Wildlife Service maintains hatcheries which discharge into waters that have been identified as habitat of bull trout, native salmon, and/or steelhead, and are located within the Nez Perce reservation. The Service also maintains a hatchery located within the boundaries of an Idaho Wildlife Management Area. The service requests that the Section III exclusion applicable to these waters be applied only to new or expanded facilities, and not existing ones.

Response: See previous response; the exclusion no longer applies to Idaho Wildlife Management Areas, but for the remaining areas, EPA believes the exclusion/waiver procedure is required for both new and existing facilities, in order to ensure adequate consultation with tribes and state and federal agencies involved in management and regulation of these waters.

16. Comment: Why does the permit exclude from coverage (absent a waiver) discharges within one mile of certain federal or state property?

Response: EPA has revised the permit at Section III to reduce the length of the buffer zones of upstream protection for the excluded areas (except drinking water intakes) from one mile to one hundred yards. Also, this exclusion no longer applies to discharges near Idaho wildlife management areas. It still applies to discharges near national parks, wildlife refuges, or wilderness areas. The reason for the exclusion is to provide extra protection for waters in these special areas, which have been designated

as reserves in part to ensure their environmental integrity and to protect fish populations, wildlife, and their habitats, and to ensure consultation with federal, state and tribal agencies involved in management and regulation of these waters.

17. Comment: The U.S. Fish and Wildlife Service suggested that the Kootenai Tribe's reservation should be added to the list of areas excluded from coverage under the permit.

Response: EPA has revised the list of areas excluded from the permit to include the Kootenai Tribe's reservation.

18. Comment: Idaho does not have any rivers flowing into Canada, hence the reference to such rivers in the exclusion is unnecessary.

Response: EPA has removed the reference to rivers flowing into Canada.

19. Comment: Operators are concerned that they may have to undertake significant study and expense in order to receive a waiver of the exclusion, and thus be allowed to discharge at their existing location. They ask how extensive the information required for waiver will be.

Response: Applicants should make best efforts to provide the requested information, described at Section IV; EPA will inform them if additional data is required. Applicants may be able to obtain much of the required information from the tribe, or state or federal agency managing the protected area, and EPA believes that such a dialog with the relevant tribe or agency will be beneficial to both parties. In particular, an applicant who discharges to the habitat of threatened or endangered species can utilize and reference the "Biological Opinion" prepared for this permit pursuant to the Endangered Species Act by the U.S. Fish and Wildlife Service, as well as EPA's "Biological Assessment", to document his petition for a waiver.

20. Comment: Several commenters noted that the industry has previously submitted applications for individual permits, between 1990 and 1995, and requested that these applications take the place of the required Notice of Intent (NOI).

Response: The NOI is required by 40 CFR 122.28(b)(2). While EPA does have historic data from applications for many of the facilities, it is preferred that all facilities provide *current* and *accurate* data via the Notice of Intent. This is because EPA has noted considerable discrepancies between production estimates provided in those earlier applications, and production data provided in response to requests for information under Section 308 of the Clean Water Act for the same time period. Also, the universe of facilities may have changed since the early 1990's, and EPA and the public need an up-to-date list of covered facilities. EPA has included language in the permit (Section V.A.) pursuant to 40 CFR 122.28(b)(2)vi. that EPA may notify a discharger that it is covered by this general NPDES permit, even if the discharger has not submitted an NOI. EPA may elect to use this provision and previously submitted applications and other knowledge and information about a facility on a case by case basis to cover facilities under the permit.

21. Comment: EPA's failure to send a facility either a notification of coverage in the General Permit, or notification that an individual permit is required, within 30 days of EPA's receipt of the facility's Notice of Intent to be covered, should result in automatic coverage under the General Permit.

Response: Approximately 125 aquaculture facilities in Idaho will be eligible for coverage under this permit upon publication, and EPA expects that NOI's for all these facilities will be submitted to EPA at roughly the same time. It is not realistic to expect EPA to process 100 NOI's within 30 days, and the regulations make no provision for such automatic coverage.

22. Comment: EPA or Idaho DEQ should provide longitude/latitude information on the facilities permitted.

Response: The permit has been revised at V.C.3.b., in recognition that EPA and IDEQ have longitude/latitude information for existing facilities, to require such information only of new permittees.

23. Comment: USFWS was unable to determine whether water quality-based permit limits for sediment, turbidity, dissolved oxygen, and temperature are required for discharges from off-line settling basins.

Response: Water quality-based limits are not required for sediment, turbidity, dissolved oxygen and temperature for off-line settling basins.

24. Comment: Several hatcheries using thermal springs for the culture of warm water species may have trouble meeting the temperature limits for cold water biota and salmonid spawning. These hatcheries should be required to cool their discharges if necessary to meet the temperature limits.

Response: EPA does not have sufficient data to determine whether or not there is a 'reasonable potential' that these facilities will cause or contribute to an excursion above state water quality standards. The permit requires effluent temperature monitoring at VI.C.2., in order to determine the potential, and contains a 'reopener clause' at IX.G., which allows EPA to modify the permit in the event that the data collected indicates the need to set temperature limits, in accordance with 40 CFR 122.62. If EPA modifies this general permit, or develops a separate general permit or individual permits for warm water hatcheries, these facilities would be responsible for determining the means of complying with the limits.

25. Comment: Several commenters encouraged EPA to eliminate flow as a criterion for establishing the facility size classifications because, they said, production and feed correlate more closely to the amount of waste produced. Idaho Department of Fish and Game stated that using flow as a criterion unfairly regulates conservation hatcheries to the same extent as commercial hatcheries, even though commercial hatcheries maintain a higher concentration of fish and feed (and hence produce more pollution) for the same flow.

Response: EPA agrees with the comment and has revised the permit to eliminate flow as a criterion for defining classes of facilities.

26. Comment: One commenter said EPA should drop feed usage as a criterion for establishing the facility size classifications. Another said that any size classification based on feed usage should provide a conversion ratio of 1.2 to 1.3 from the weight of dry feed to wet fish product.

Response: EPA has maintained feed usage as a criterion in the permit to be consistent with the NPDES regulations at 40 CFR 122.24, and because EPA agrees with the previous comment that feed usage correlates closely to the amount of waste produced. The final permit does provide a classification system at VI.C.2. which uses a conversion ratio of 1.2 lbs feed to 1.0 lbs fish production, after reviewing data provided by the commenter.

27. Comment: The Idaho Department of Fish and Game commented that the number of fish cultured at a conservation hatchery for a given amount of water flow is much lower than at a commercial hatchery, and therefore flow should not be used as a criterion for classification. IDFG also stated that “acclimation facilities” do not feed fish and therefore should not be required to have a permit.

Response: EPA has revised the permit to eliminate flow as a basis for classification, and also revised the definition of “production” to mean the weight of fish grown and fed; thus a facility which does not feed fish is not subject to the permit.

28. Comment: All effluent limits should be expressed in terms of pollutant loads as lbs/day.

Response: EPA regulations (40 CFR 122.45(f)) state that pollutant limits shall be expressed as mass limits (e.g., lbs/day) with some exceptions. The pollutants limited in this permit fall under these exceptions. Settleable solids is a pollutant that cannot appropriately be expressed in terms of mass; rather, it is expressed in volumetric terms (ml/L). Total suspended solids limits are based on technology-based standards which are expressed in terms of concentrations (mg/l), rather than mass. The phosphorus limits in the permit were based on concentration data that members of the industry have been achieving in the current decade. Converting these concentration limits to load limits would require that EPA know each facility’s flow rate or production to calculate individual limits for each facility. EPA does not have such data on each facility projected to be covered by this permit, thus it was infeasible to calculate mass limits for all facilities. EPA was able to express a phosphorus mass limit in lbs/day for certain facilities because the state had developed a TMDL for that pollutant, which included allowable loads for those facilities. As TMDL’s are developed by the state for various pollutants, the permit will be modified to include TMDL-specified load limits.

29. Comment: What is the basis for the coefficient of variation for the different effluent parameters?

Response: The coefficient of variation is a standard measure of the relative dispersion or variation of a distribution or set of data, defined as the ratio of the standard deviation to the mean (USEPA, 1991: Technical Support document for Water Quality-based Toxics Control, EPA/505/2-90-01, p.95). The coefficient of variation represents the relationship between the long-term average concentration, various short-term averages (e.g., monthly, weekly or even daily), and the maximum value of a pollutant discharge,

and is central in the development of average monthly limits and maximum daily limits (ibid., p.93-110). The equation for the coefficient of variation is as follows:

$$CV = s/\mu , \text{ where } \begin{array}{l} CV \text{ means the coefficient of variation} \\ S \text{ means the standard deviation, and} \\ \mu \text{ means the average (or mean)} \end{array}$$

In order to develop the original coefficient of variation used in the development of limits within the draft permit, EPA used its understanding of aquaculture operations and discharges, industry reports of well-managed feeding and treatment activities, and limited data. Data was submitted by industry during the comment period which provided a more robust data set and basis for the development of coefficients of variation. The coefficient of variation for each parameter was changed accordingly and used in place of those proposed in the fact sheet.

30. Comment: The commenter stated that the aquaculture industry has consistently met the effluent limits on settleable solids (SS) and total suspended solids (TSS) that were included in its previous permits. The commenter believed that such a record of compliance would justify removing limits and monitoring requirements on these two pollutants in raceways from the new general permit.

Response: For the most part, EPA has retained effluent limits and monitoring requirements on these two pollutants. First of all, not all facilities have demonstrated consistent compliance with these limits. Furthermore, the effluent limits in the previous permits were based on old technology and new technology now enables the industry to meet more stringent limits. However, EPA believes that a limit on TSS includes and is protective of settleable solids, and therefore has revised the permit at VI.C.2. to eliminate the effluent limit and monitoring requirement for SS in raceways, ponds and full-flow settling basins.

31. Comment: In the past, earthen pond facilities did not have any trouble meeting the settleable solids and total suspended solids limits, in part because limits in the current permit do not apply to harvest periods. Monitoring performed during harvest indicates that for one pond, 60 mg/L and up to 100 mg/L TSS were in the effluent. This occurs for a very short time, and a small percentage of time for the entire operating period for the facility. EPA is urged to allow for “no limits” for TSS during harvest periods, as in our current permit.

Response: EPA has revised the permit at Section VI.C.2. and 3. to include limits and monitoring for settleable solids and total suspended solids for earthen-bottomed ponds during harvest events. The limits were based on Best Professional Judgement that solids discharges from ponds during harvest are similar to discharges from offline settling basins during cleaning of raceways’ quiescent zones. Based on data submitted by the commenter, these limits should be attainable for pond operators. Use of Best Management Practices, such as fencing off a portion of the pond to limit fish access during harvest, or using full-flow settling basins, should help operators meet these limits. Required monitoring will provide additional data on achievable technology for pond facilities which will be used to revise the limit in the future as necessary.

32. Comment: What is the basis for the limitation on concentrations of total phosphorus

across the entire State of Idaho, given that some parts of the state have no phosphorus problem?

Response: EPA Region 10 developed the technology-based limit on concentrations of total phosphorus based upon a review of effluent data and technical journals. Technology-based limits apply to the entire aquaculture industry throughout Idaho, even if a water quality problem from phosphorus is not apparent in some parts of the state.

33. Comment: Can EPA assure that all of this testing [monitoring] will actually lower phosphorus entering the Snake River, or will other sources of phosphorus entering the river keep the TMDL above the allotted amount? That is, will the fish industry have to bear the costs of a program that still doesn't result in a clean river?

Response: Monitoring does not itself lower the amount of phosphorus entering the river, but rather it will help EPA and the public know whether the aquaculture facilities are complying with the limits intended to clean up that portion of the phosphorus problem attributable to the aquaculture industry. The state's TMDL reduces phosphorus from all sources. EPA is incorporating the TMDL's phosphorus allocations for the point sources into NPDES permits as limits for phosphorus. Nonpoint source controls and reasonable assurances that these controls will work are discussed in the state's TMDL. The fish industry is only expected to bear the cost of its contribution to the phosphorus problem with the permit requirements, as explained in the state's TMDL.

34. Comment: EPA should adjust the maximum daily limit for total phosphorus to 0.15-0.18 mg/L to more accurately reflect the level of variation inherent in phosphorus monitoring. Several commenters submitted data summaries to demonstrate the range of values sampled for total phosphorus during recent years of intensive monitoring.

Response: In the final permit at Section VI.C.2. and XI.A., EPA has revised the limits for total phosphorus based upon a revision in the estimation of the coefficient of variation for this pollutant. Upon review of data submitted by industry, the estimation of the coefficient of variation for total phosphorus has been increased from 0.2 to 0.35. The development of the permit limits follows the presentation in the fact sheet. These limits apply to aquaculture facilities throughout the state; in the Mid-Snake and Billingsley Creek watersheds these limits apply until such time that the facilities must comply with more stringent limits developed in TMDL's for these watersheds. EPA used the revised coefficient of variation to adjust these TMDL-based limits as well in Section XI.A.

35. Comment: The permit should provide different limitations and requirements for warm water aquaculture facilities versus coldwater facilities, given that each raises different species of animals, having different sizes, life styles, and requirements for care and culture.

Response: EPA has revised two of the permit's effluent limits to reflect the differences between warm and cold water aquaculture. In the final permit, warm water facilities have less stringent limits for phosphorus and total suspended solids because data received from these facilities indicated that the technology-based standard for cold-

water facilities was not achievable by warm water facilities, due to differences in rearing practices.

36. Comment: EPA should remove both the effluent limit on pH and the requirement that pH be monitored in both raceways and offline settling basins. Given the buffering capacity of the water used in aquaculture operations, pH does not markedly change from the ambient levels of the input springs and streams. Therefore limiting and monitoring pH have no value, while the cost of an electronic pH meter is onerous.

Response: Data provided by the industry substantiate the comment and indicate that at these facilities, there is little change from ambient pH to the pH of the discharge. Therefore, EPA has revised the permit at VI.C.2. to require no limits and no monitoring of pH.

37. Comment: If an aquaculture facility has no settling basin or comparable substitute facility providing adequate retention time, there is an incontestable *prima facie* case that a permit violation is occurring or will immediately occur.

Response: The point of the comment appears to be that EPA should require a settling basin or some other specific technology to control solids. EPA's role, however, is generally to specify the results that must be obtained, rather than to tell a discharger what technology must be used. If the discharger is not meeting the TSS and SS limits, regardless of the technology in use, the discharger is subject to enforcement action. EPA has revised the permit at Section VI.B. to include additional prohibited practices, most of which originated from the current permit, to control discharge of solids.

38. Comment: For offline settling basins, the new permit contains instantaneous maximum and maximum daily limits of 100 mg/L TSS, monitored by grab sample, and an average monthly limit of 67 mg/L TSS. These limits were based on the JRB study of 1984, which was poorly designed (the samples were too few and too varied) and is now out of date (the industry has changed its rearing and waste management practices). Because the JRB study was flawed, EPA should instead continue to use the effluent limits from the previous permits, i.e. eliminate the instantaneous limit of 100 mg/L TSS, and retain 100 mg/L as an average monthly limit, monitored by composite sampling.

Response: The JRB study was designed to provide EPA with the background information necessary to establish effluent limitations for trout aquaculture facilities in Idaho. This development document focused upon a detailed water quality monitoring program at seven facilities in Magic Valley, extending EPA's previous studies of effluent discharges and water quality (USEPA 1974; HydroScience 1978). It assessed both effluents physicochemistry and receiving water quality and developed a useful and significant database. The JRB Study has served as the basis for technology-based limits since 1984 and will continue to serve as a basis until such time that EPA, IDEQ and the industry collaborate to update and expand this basis.

39. Comment: The EPA monitoring plan is basically a good one and it is apparent that much thought has gone into the plan to ensure that discharges to the waters of the United States and the state of Idaho meet state water quality standards. Also, IDFG commends EPA for its effort in creating a permit which will provide valuable information regarding sediment and nutrient discharge generated by facilities throughout Idaho.

Response: No response necessary

40. Comment: Compliance monitoring should be done by the regulatory agencies, either EPA or Idaho DEQ; having the aquaculture facilities do this monitoring themselves is like asking the fox to guard the hen house. Also, EPA and DEQ have the necessary technical capability to carry out the sampling and analysis, while the facilities may not.

Response: Neither agency has the resources to conduct regular monitoring at all the facilities to be covered by this permit. Further, the Clean Water Act, Section 308(a)(2)(A), specifically provides that EPA “shall require” the owner or operator of any point source to perform such monitoring and reporting as is necessary to determine whether any violation has occurred. Sampling and analysis which goes beyond the technical capability of an owner/operator is generally contracted to commercial laboratories and consultants. EPA will take the samples when it conducts compliance inspections.

41. Comment: The commenter stated that EPA has no authority to require that facilities provide production data. Further, the commenter stated that this data constitutes proprietary information, and is not adequately protected by “Confidential Business Information” procedures, due to public-access-to-information statutes, such as the Freedom of Information Act. It was suggested that instead of requiring self-reporting of facility-specific data, EPA contract for an industry-wide study reported as combined totals. Specifically, the commenter urged that EPA remove the requirement for monthly reporting of production poundage and feed usage.

Response: EPA has specific authority to require production data from aquaculture facilities under 40 CFR 122.21(i)(2)(iv), as well as general authority under section 308 of the Clean Water Act. Regarding the potential for disclosure of production data, under EPA’s public information regulations, 40 CFR Part 2, permittees may request “Confidential Business Information” (CBI) status for production data at the time of submission, and EPA will treat the data as confidential without further substantiation from the permittee, until such information is requested from the public. If a request is received, the permittee will have the opportunity to support his claim for CBI status. If EPA’s legal staff determines that the data does constitute CBI, the public request for the data will be denied under exemption 4 of the Freedom of Information Act. Under 40 CFR 2.211(c), the penalties for improper release of business information by EPA employees include dismissal, fines, and in some circumstances criminal prosecution; for improper release by EPA contractors and subcontractors, the potential penalties are suspension or debarment and in some circumstances criminal prosecution. Idaho law also provides an exemption to its public disclosure requirements for production records. (Idaho Code 9-340(4)(b))

42. Comment: The monitoring required by the general permit places a disproportionately greater expense on small facilities when calculated as a fraction of profits or of market price. The monitoring costs are equal to 2-4% of the value per pound for small facilities, compared to 0.5% of value per pound for large facilities. Further, the total cost of meeting the testing requirements, combined with the costs of meeting the substantive discharge limitations and other requirements of the permit, will equal approximately 36% of total income for small operators.

Response: EPA has revised the permit at VI.C.2. and VI.C.3. to reduce the number of parameters and the frequency of sampling for smaller facilities, for both the compliance monitoring and effluent characterization requirements.

43. Comment: The permit should represent that “net TSS” and “net TP” loads are calculations derived from concentrations data.

Response: EPA has modified the permit at V.B.2.c. and d. to clarify how to calculate net loads from concentration data.

44. Comment: EPA should not specify the type or location of samples to be collected in the monitoring and reporting of these pollutant parameters.

Response: NPDES permits generally specify type and location of sample required in order to ensure accurate and consistent compliance monitoring between facilities.

45. Comment: The U.S. Fish and Wildlife Service recommends that EPA require monthly compliance monitoring for the Service’s conservation hatcheries. The Service believes that the variable and cyclic nature of its production schedule is such that sampling once per quarter is too infrequent, but once per week is too frequent.

Response: Because the permit was revised to eliminate flow volume as a criterion for determining monitoring frequency, USFWS’s hatcheries are now classified as Class 2 facilities, which are required to perform monthly monitoring.

46. Comment: EPA should reduce the frequency of monitoring required for the largest facilities for TSS, SS, and TP from weekly to one composite per month, because the higher frequency is not useful but is expensive for industry. Other commenters also believed that weekly monitoring is excessive and recommended only quarterly or semi-annual tests. These commenters stated that the costs of the proposed monitoring requirements alone could be over \$25,000 per year.

Response: EPA has revised the permit at VI.C.2. and 3. to reduce the number of parameters and the frequency of sampling in both compliance monitoring and effluent characterization monitoring. Also, the permit was revised at VI.C.2.j. to reflect President Clinton’s Executive Order on monitoring, providing that compliance monitoring may be reduced for permittees who are in 100% compliance with permit limits during the first three years of the permit. The modified monitoring may include changes in (1) sample parameters, (2) sample types, (3) sampling stations, and (4) sampling frequencies.

47. Comment: For years effluent limitations have been measured by composite samples (vs. grab samples) which reflect the typical loads of aquaculture operations and are representative of each facility being monitored. EPA should go back to composite sampling, rather than grab sampling with instantaneous maximum limits.

Response: The permit does not *replace* composite sampling with grab sampling, rather the permit limits are now stated in terms which can be measured by either composite (maximum daily limits) or grab samples (instantaneous maximum limits).

48. Comment: The method contained in the draft permit for calculating the lbs/day of a pollutant discharge from mg/L concentrations is somewhat confusing and should be expressed in a step-wise fashion such as “mg/L multiplied by CFS and then multiplied by 5.4 to equal lbs/day.”

Response: EPA has attempted to clarify the description of the calculation in the final permit at VI.C.2.c. and d.

49. Comment: EPA should allow the determination of flow in the discharge from offline settling basins to use a combination of time and flow rate.

Response: EPA has revised the permit at VI.C.2. and 3. to provide for measures using ‘other approved methods.’ Facilities wishing to use other methods, for example a combination of time and flow rate, should contact EPA in writing to request approval of their proposed method.

50. Comment: One commenter stated that temperature should be monitored at all hatcheries; another stated that temperature should not be monitored because there are no temperature limits in the permit.

Response: The final permit continues to require monitoring at all hatcheries. Under section 308 of the Clean Water Act, EPA is not limited to requiring information for compliance monitoring purposes, but rather can require information as necessary to carry out the Act, including development of effluent limits. The General Permit requires collection of temperature data to develop Total Maximum Daily Loads (TMDL’s), as a basis for future permit limits.

51. Comment: One commenter stated that the effluent characterization study should be increased from one year to 18 months. Other parties commented that the effluent characterization study should be eliminated from the permit, because they believe there is sufficient existing data to accurately characterize Idaho aquaculture discharges, and that collecting additional data would be too costly.

Response: The NPDES regulations at 40 CFR 122.44(i) and 122.48 provide EPA with discretion to determine appropriate monitoring conditions. EPA does not consider that the existing data meets necessary quality assurance guidelines, and at least one member of the industry has disclaimed the validity of the existing data. The effluent characterization study required by the permit is of limited scope and duration, and will serve the important purpose of providing data of adequate quality and quantity to develop TMDL’s for nitrogenous materials and temperature for different Idaho watersheds, as a basis for future permit limits. EPA believes that 12 months of data from the entire industry (approximately 125 facilities) is sufficient to capture the variability of the discharges throughout the year and characterize them.

52. Comment: Several commenters said that the permit contains redundant testing requirements which are costly and of no value.

Response: EPA has revised the permit to no longer require that dischargers conduct settleable solids compliance monitoring of raceways, ponds and other non-offline

settling basin discharges. Further, rather than require dischargers to conduct a sediment impact study, EPA will now conduct the study, with only the largest facilities participating in design and review. The permit now contains only three different testing provisions, all of which serve different purposes. To the extent some include the same pollutants, EPA has eliminated redundancy by allowing the data to be used for both characterization and compliance monitoring purposes. The testing provisions and their purposes are as follows:

- (a) Compliance monitoring: monitors flow, TSS, SS (only for offline settling basins), TP and temperature (only for non-offline settling basin discharges) for compliance with effluent limits.
- (b) Effluent characterization study: monitors flow, TSS, SS, TP, total Nitrate plus Nitrite, total ammonia, Total Kjeldahl nitrogen, dissolved oxygen and temperature. Because this study covers all of the pollutants required for compliance monitoring, to avoid redundancy, the permit provides that data obtained for the effluent characterization study can be used to fulfill the compliance monitoring requirements.
- (c) Whole effluent toxicity testing is aimed at determining acute and chronic biological effects of the discharges, as well as cumulative effects of discharge on receiving water. No other monitoring requirement in the permit is intended to provide the same information.

53. Comment: There were several comments to the effect that WET (whole effluent toxicity) testing is costly and, the commenters believed, unnecessary because: a) EPA already has data on toxic chemicals used by the industry; b) approval of these chemicals in other contexts should be taken as proof that they pose no threat to aquatic life; c) the chemicals are not used by the aquaculture industry in sufficient concentration to be toxic to aquatic life; d) EPA should rely on 'better estimates' of certain pollutant loads.

Response: The permit retains the requirement for WET testing. While the commenters did provide some useful data, EPA believes that an additional year's worth of reporting more precise estimates of chemical usage is nonetheless necessary because:

- (a) EPA's existing data from industry is not sufficient to perform the required analysis of "reasonable potential to cause or contribute to an instream excursion above state water quality standards";
- (b) The approval of these chemicals in other contexts (such as by the Food and Drug Administration) is not in itself proof of no threat to aquatic life;

54. Comment: WET testing should be done by EPA or DEQ; fish farmers don't know how to do it properly.

Response: The NPDES regulations provide, at 40 CFR 122.41(h), that the permittee shall furnish any requested information necessary to determine appropriate limits. Permittees may contract for testing and analytical services.

55. Comment: The U.S. Fish and Wildlife Service suggests that in addition to Material Safety Data Sheets on disease control drugs, disinfectants and other chemicals, EPA require submission of label instructions and restrictions on any of these chemicals used by a facility.

Response: EPA has revised the permit as suggested, at VI.C.4.b. and 7.c.(6).

56. Comment: There is no reason to test for toxins because fish are indicators of clean water. Fish farming is not a toxic activity.

Response: It is true that some fish are used as indicators of toxicity, therefore EPA is not requiring fathead minnow WET testing, which is a common requirement for point source dischargers. Instead, EPA is requiring only testing of *Ceriodaphnia*, an indicator of toxicity to animals other than fish. The reason for including requirements in the permit to submit data on disease control drugs, disinfectants and similar products is to determine whether or not certain aspects of fish farming may in fact be toxic activities.

57. Comment: EPA regulations authorize the Agency to request certain NPDES permittees to collect effluent monitoring data on toxics, but such a report is not specifically authorized for aquaculture facilities in 40 CFR 122.21(i).

Response: Section 308(a) of the Clean Water Act authorizes EPA to require such information as is reasonably required to develop permit requirements and otherwise carry out the Act. EPA considers that this information is necessary to determine whether there is a 'reasonable potential to cause or contribute to an excursion above water quality standards.'

58. Comment: EPA cannot determine whether there is a 'reasonable potential' that discharges of toxic pollutants from aquaculture facilities will 'cause or contribute' to an excursion above water quality standards, without quantifying the discharges of the same pollutants from all other sources in the watershed.

Response: EPA believes that the data requested of the permittees on usage of disease control drugs, disinfectants and other chemicals usage, in combination with receiving water flows from gauge stations operated by USGS and water quality data currently collected IDHW-DEQ, the University of Idaho, and others, will provide adequate data to perform a reasonable potential analysis in accordance with the guidance provided in the EPA Technical Support Document. As discussed in the Supplementary Information Document (SID) for the Great Lakes Rule (EPA-820-B-95-001) and the Technical Support Document for Water Quality-based Toxics Control (TSD), EPA/505/2-90-001, a broad scope of data and information can be relevant in determining 'reasonable potential' for a given discharge. Items include effluent pollutant concentration data, receiving water background data, dilution, type of industry, existing data on pollutants, history of compliance problems and toxic impact, type of receiving water, and designated use.

59. Comment: Sediment deposition does not usually occur downstream of aquaculture discharges, therefore, the sediment impact study is unnecessary.

Response: Both EPA and state inspectors have observed downstream deposition of

aquaculture residues. Also, observations made during studies of Idaho receiving waters do show sediment deposition downstream of aquaculture facilities, e.g., organic accumulations reaching depths of 18 inches or more in Billingsley Creek, and six feet deep below Box Canyon. However, the permit has been revised so that EPA will be responsible for conducting the study.

60. Comment: Any downstream accumulation of sediment, and the effect thereof, is almost exclusively a function of the volume and velocity of the receiving water and the hydraulics of the particular mixing zone, none of which is under the control of the permittee.

Response: EPA agrees that the permittee has no control over the volume and velocity of the receiving waters and the hydraulics of the mixing zone, and that these variables do affect downstream accumulation. The amount of suspended solids discharged is also an important variable, however, and is within the control of the discharger; therefore EPA expects facilities to control the discharge of this pollutant. The sediment impact study which EPA will conduct will help EPA understand the relative contributions of these variables.

61. Comment: There is no way for EPA to distinguish what portion of any sediment problem is contributed by aquaculture facilities and what is contributed by other sources in the watershed, therefore the sediment study should be omitted from the permit.

Response: EPA believes it is possible to distinguish between agricultural and fish farm wastes on the basis of chemical and physical differences. The sediment study will provide additional data about the relative contributions of different sources to sediment problems.

62. Comment: EPA has incorrectly assumed that BMP information is already available to the aquaculture industry. EPA should eliminate the proposed sediment study and instead require facilities to participate in a study of efficient best management practices and waste treatment.

Response: EPA has replaced the requirement that a sediment study be conducted with a requirement at Section VI.C.5. that the largest facilities (Class 1) and warm water facilities conduct a BMP and waste treatment efficiency study, as described by this and other commenters.

63. Comment: EPA does not have the need or the right to obtain operational information from aquaculture facilities.

Response: Section 308 of the Clean Water Act provides authority for EPA to require the owner/operator of any point source to provide "such other information as [it] may reasonably require," whenever necessary to carry out the Act. EPA needs this information available for various purposes related to carrying out the Act, including:

- (a) Determining compliance with the permit;
- (b) Determining compliance with water quality standards;

- (c) Developing subsequent water quality standards;
- (d) Developing subsequent permit conditions;
- (e) Determining applicability of the requirement to have a permit.

64. Comment: The heart of the permit is the requirement for a BMP plan. The fact that EPA does not review and approve the required Best Management Practices Plan provides a huge hole for scofflaw operators to slip through. The requirement is meaningless without review and approval.

Response: EPA does not agree that the requirement is meaningless without review and approval. The permit requires that the BMP plan be kept on site. This will provide an opportunity for inspectors to review the plan, and determine completeness and whether or not the plan is being followed. Inspectors' reports will provide information to EPA enforcement officers about whether or not the facility is in compliance with the BMP section of the permit.

65. Comment: BMP Plans developed by producers shouldn't be an enforceable part of the permit.

Response: EPA expects permittees to comply with BMP Plans which they themselves have developed and EPA's inspectors will look at a facility's BMP Plan and evaluate how it is being implemented. If a facility fails to comply with its BMP Plan, in determining whether to bring an enforcement action or not, EPA would consider the facts of the particular case, including whether or not the failure caused or contributed to a violation of some other provision of the permit.

66. Comment: The U.S. Fish and Wildlife Service supports Best Management Practice Plans as a tool for minimizing the discharge of pollutants from aquaculture facilities. Another commenter also supported the development of BMP Plans as the best way to minimize wastes and pollutant loads, but urged EPA to recognize that the BMP Plan requirement must be flexible enough to allow each owner/operator to create a plan most suitable to that facility's specific situation.

Response: EPA recognizes that the owner/operator of a facility is in the best position to develop a BMP plan suitable to that facility. The permit requirement provides flexibility by emphasizing goals and objectives rather than requiring specific practices.

67. Comment: The U.S. Fish and Wildlife Service suggests that at butchering and processing facilities, monitoring of water quality parameters coincide with the butchering and processing activity.

Response: EPA has revised the permit to incorporate this suggestion VI.D.2.

68. Comment: The U.S. Fish and Wildlife Service recommends that the frequency of monitoring for fish processors be increased to monthly, rather than quarterly, for BOD5, oil and grease, ammonia, total phosphorus, and others.

Response: Because monitoring done under existing permits indicates that processing

facilities are operating well under the permit limitations, EPA believes that quarterly monitoring is appropriate.

69. Comment: The state water quality standard for “floating, suspended or submerged matter” provides some flexibility, so the permit should not contain a total exclusion of such matter.

Response: EPA has revised the permit at VI.D.1. for butchering and processing to be consistent with the state water quality standard. The permit now prohibits discharge of any floating, suspended or submerged matter in concentrations causing nuisance or objectionable condition or that may impair designated beneficial uses.

70. Comment: The U.S. Fish and Wildlife Service is uncertain whether the permit requires that temperature, chlorine and ammonia meet the water quality standard numeric limit at the end-of-pipe, or whether facilities will be allowed a mixing zone.

Response: EPA does not have enough data to determine, for temperature or ammonia, whether these discharges have a ‘reasonable potential to cause or contribute to an excursion above water quality standards,’ therefore, the permit does not include numeric discharge limits for these pollutants. The permit does require monitoring for these pollutants, however, to provide data that will enable EPA to develop limits for future permits. EPA has revised the permit at Section VI.B. to prohibit discharge of untreated cleaning wastewater, of which chlorine may be a part, and by adding an objective of the BMP plan to include detoxifying water disinfected with chlorine, prior to discharge. Butchering and processing facilities have an end-of-pipe chlorine limit which meets the states water quality standard numeric criteria for aquatic life.

71. Comment: EPA should develop a laboratory certification process for labs analyzing aquaculture samples, to ensure that all labs use the same QA/QC protocols. In addition, the permit could be simplified if it eliminated the QA section and just stated that monitoring must be conducted in accordance with EPA guidance documents.

Response: EPA does not have the resources to develop an industry-specific lab certification process. However, EPA has prepared a QA/QC guidance document specifically for aquaculture facilities, which will be sent to each operator covered by the permit. This should assist them in their selection of a laboratory with acceptable QA/QC protocols and analysis methods. The QA section of the permit has been retained to make clear that QA requirements are enforceable.

72. Comment: Conservation hatcheries maintain records on the numbers and pounds of fish released into the wild rather than sold. The reporting of production requirement should be modified to include releases as well as sales.

Response: The permit has been revised to include releases as well as sales.

73. Comment: The Recording and Reporting requirements section duplicates requirements found elsewhere in the permit.

Response: The Recording and Reporting Requirements section, now Section VIII., summarizes the requirements stated in the NPDES regulations at 40 CFR 122.41,

which must be included in all permits. This section provides some additional information and additional requirements beyond those found elsewhere in the permit.

74. Comment: Operators cannot provide 24-hour noncompliance reports if laboratory testing takes 2-3 weeks to complete.

Response: The permit at Section VIII.D. requires that the facility report non-compliance within 24 hours from the time “a permittee becomes aware of the circumstances”, as stated in the NPDES regulations at 40 CFR 122.41. Therefore, whenever laboratory analysis is necessary to confirm non-compliance, the 24 hours would begin when the permittee received results from the lab confirming that a violation had occurred.

75. Comment: The U.S. Fish and Wildlife Service recommends that permittees be provided with five ‘business days’ to submit written notice of non-compliance.

Response: The NPDES regulations, at 40 CFR 122.41 (l)(6), require written notice of non-compliance within “5 days” of the time the permittee becomes aware of the circumstances, therefore the final permit retains this requirement.

76. Comment: Commenters expressed concern that the language in what is now Section VII.B. of the permit, “Duty to Comply,” is overly general, making it difficult to determine exactly what EPA will consider to be a violation.

Response: This language was taken directly from the NPDES regulations at 40 CFR 122.41(a), and is incorporated into all permits.

77. Comment: Apparently referring to what is now Section VII.E. of the permit, “Need to halt or reduce activity not a defense”, a commenter stated that EPA should not ask permittees to waive any rights they may have with regard to government ‘taking’ of private property without compensation.

Response: This language was taken directly from the NPDES regulations, at 40 CFR 122.41(c), and is a required condition of all permits. It does not affect any valid ‘taking’ claim a permittee might have.

78. Comment: Issuance of a permit that does not equitably allocate total allowable phosphorus discharge amounts is an infringement of property rights.

Response: Under section 301 of the Clean Water Act, no one has a right to discharge pollutants except in compliance with an NPDES permit. Further, the phosphorus limits in Section XI A, Appendix A were derived from the TMDL developed by Idaho DEQ pursuant to CWA section 303(d). The NPDES regulations, at 40 CFR 122.44(d)(1), require that each permit include conditions to achieve water quality standards established under section 303, which includes any TMDL.

79. Comment: The commenter questioned EPA’s conclusion that the NPDES permit is not subject to the Regulatory Flexibility Act of 1980, particularly because that Act has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996.

Response: The amendment of the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*,

(RFA) by the Small Business Regulatory Enforcement Fairness Act (SBREFA) does not alter EPA's position that NPDES general permits are permits under the Administrative Procedures Act (APA), rather than rule-makings, and thus not subject to the RFA.

80. Comment: What is an example of a type of noncompliance that would require annual reporting, rather than 24-hour and 5-day reporting?

Response: Examples of noncompliance that would not require 24-hour and 5-day reporting, but would need to be reported in the annual report are: missing the deadline for submitting the quality assurance plan; not reporting changes in ownership of the facility; and not performing, or reporting the monitoring as prescribed in the permit.

Additional Changes

Other revisions to the permit were made to clarify permit conditions, correct grammatical or typographical errors, or omissions, or to remove unnecessary conditions. Section VI.C.2. now covers both effluent limitations and monitoring requirements based on type of facility. Tables were devised to show both limitations and monitoring requirements for each type of discharge that facilities have. This should assist operators in understanding the conditions that pertain to their specific discharges. To facilitate an understanding of where monitoring is required at each facility, EPA added a requirement to the NOI that operators identify the locations of monitoring points on the map required of the facility.

EPA revised the permit to include equations for the calculation of compliance with permit limitations for butchering and processing at Section VI.D.3.

The draft permit stated under Butchering and processing facilities that the interim minimum level for chlorine is 20 ug/L. Since publication of the draft permit, the EPA has approved and adopted a final minimum level of 100 ug/L for chlorine. The method detection level remains at 10 ug/L. The permit has been revised at VI.D.1.b. to reflect this action by EPA, and clarify what is required of the permittee as a result of this action.

The unnecessary conditions removed from the permit were those associated with sanitary waste treatment facilities and mixing zones. The conditions for sanitary wastes treatment facilities was removed because the only facility known to EPA which had such a facility terminated use of the facility since publication of the draft permit. The condition providing for mixing zones was removed because it did not provide for adequate public notice of permit limitations for those facilities which may have requested mixing zone limits.

Under the Endangered Species Act, EPA consulted with the U.S. Fish and Wildlife Service on the effects of the permit on listed endangered and threatened species in receiving waters of aquaculture facilities. The USFWS has issued a Biological Opinion on the effects of EPA issuing this and eight other NPDES permits that authorize discharge into the Middle Snake River. The Services's opinion is that the proposed action is not likely to jeopardize the continued existence of listed snail species in the action area. The opinion also includes an "Incidental Take Statement". Under the terms of Section 7(b)(4) and Section 7(o)(2) of the Endangered Species Act, take of species that is incidental to an agency's action is not prohibited provided that such taking is in compliance with the terms and conditions of the Incidental Take Statement. The Service identified eight "reasonable and prudent measures"

that must be addressed by EPA in order to minimize incidental take. As described in the Biological Opinion, measures listed in the Incidental Take Statement are “non-discretionary, and must be implemented by the EPA so that they become binding conditions of any grant or permit issued to the applicant...”

In order to meet the conditions specified in the Incidental Take Statement, EPA has revised the twenty-four hour notice of noncompliance reporting requirements in Section VIII.D. of the permit. The permittee shall report conditions that endanger listed snail species to both EPA and the U.S. Fish and Wildlife Service within 24 hours from the time a permittee becomes aware of the circumstances. Likewise, written reports on noncompliance occurrences that endanger listed Snake River snails must be sent to the Service. Changes to address these reporting requirements have been made to the final permit. No other revisions to the NPDES permit language are necessary to address the conditions of the Biological Opinion.

IDEQ provided certification, pursuant to CWA section 401 that there is a reasonable assurance that the activities allowed under this permit will comply with applicable requirements of sections 301, 302, 303, 306, and 307 of the CWA and the Idaho Water Quality Standards and Wastewater Treatment Requirements. The certification was dependent upon compliance with the terms of the permit and conditional upon incorporating a statement about modifying the permit to be consistent with future waste load allocations in order to ensure compliance with application state standards. Section IX.G. provides for such modification of the permit as necessary. EPA will provide any such modifications to the permit, to IDEQ for review for state certification, as requested, prior to issuing a modified permit to the industry.